Appl. No. 09/882,283
Amdt. sent January 28, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2133

PATENT

REMARKS/ARGUMENTS

Claims 2, 9, 10, 15, 22, 23, 29, 30,31 and 32 have been amended; claim 1 has been canceled; and claims 3-8, 11-14, 16-21 and 24-28 remain unchanged. Thus, claims 2-32 are pending.

Claims 2-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

Claims 2, 4-15 and 17-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng; Jung-Fu (US 6,658,071).

Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng; Jung-Fu in view of Crozier, Stewart et al. (US 6145114 A).

Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng; Jung-Fu in view of Benedetto et al.

As amended, all the pending claims of the subject application comply with all requirements of 35 U.S.C. Accordingly, Applicant requests examination and allowance of all pending claims.

The Rejection Under 35 U.S.C. § 112

Claims 2-32 are rejected under § 112. The claims and the specification have been amended to more clearly recite and describe the subject matter and specific embodiments of the present invention. It is believed that claims 2-32 as amended overcomes the rejection under § 112. Withdrawal of the rejection is respectfully requested.

The Rejection Under 35 U.S.C. § 102(e)

Claims 2, 4-15, 17-30 are rejected under § 102(e) as being anticipated by Cheng. Claim 2 has been amended to recite, among other features, "processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics, wherein said backward recursion does not take into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 2 is believed to be allowable over the cited reference.

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Claims 4-14 depend from claim 2 and include all of the limitations of claim 2. As such, claims 4-14 are also believed to be allowable for at least the same reasons as stated above with respect to claim 2.

Claim 15 has been amended to recite, among other features, "processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics and backward transition metrics, wherein said backward recursion does not take into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 15 is believed to be allowable over the cited reference.

Claims 17-28 depend from claim 15 and include all of the limitations of claim 15. As such , claims 17-28 are also believed to be allowable for at least the reasons stated above with respect to claim 15.

Claim 29 has been amended to recite, among other features, "means for processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics, wherein said backward recursion does not take into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 29 is believed to be allowable over the cited reference.

Claim 30 has been amended to recite, among other features, "means for processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics and backward state transition metrics, wherein said backward recursion does not take into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 30 is believed to be allowable over the cited reference.

The Rejections Under 35 U.S.C. § 103(a)

Claims 3 and 16 are rejected under § 103(a) as being unpatentable over Cheng in view of Crozier. Claims 3 and 16 depend from claim 2 and include all of the limitations of claim 2. As such, claims 3 and 16 are also believed to be allowable for at least the same reasons as stated above with respect to claim 2.

Claims 31 and 32 are rejected under § 103(a) as being unpatentable over Cheng in view of Benedetto et al. Claim 31 has been amended to recite, among other features, "processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics, wherein said backward recursion does not take

into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 31 is believed to be allowable over the cited references.

Claim 32 has been amended to recite, among other features, "processing a backward recursion on said input soft decision information based on said reduced-state trellis representation to produce backward state metrics and backward state transition metrics, wherein said backward recursion does not take into account decisions on said FSM inputs generated from said forward recursion." As amended, claim 32 is believed to be allowable over the cited references.

No New Matter

No new matter is introduced by the present amendments to the claims. For example, the specification at p. 6-7, equations (6) and (7), at p. 8, equations (11) and (12), and accompanying text describe in detail the operation of specific embodiments relating to the processing of a backward recursion on input soft decision information based on a reduced-state trellis representation to produce backward state metrics wherein the backward recursion does not take into account decisions on FSM inputs generated from the forward recursion. As such, the present amendments comply with the requirements under 37 C.F.R. § 1.121(f).

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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